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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/552,366

10/03/2005

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GRP-0140

8303

23413 7590 04/30/2008
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EXAMINER

SZMAL, BRIAN SCOTT

ART UNIT

PAPER NUMBER

3736

MAIL DATE

DELIVERY MODE

04/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/552,366	Applicant(s) JADIDI, FARAMARZ	
	Examiner Brian Szmaj	Art Unit 3736	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 52-68 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 52-68 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Objections

1. Claims 52, 53, 55 and 68 are objected to because of the following informalities:
The claims disclose “set--up”, which should read as “set-up”. Appropriate correction is required.
2. Claim 52 is objected to because of the following informalities: In the last line, “saidmeans” should read as “said means”. Appropriate correction is required.
3. Claim 55 is objected to because of the following informalities: In line 2, “apparatus-“ should read as “apparatus”. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 52-55, 58, 59, 62, 66-68 are rejected under 35 U.S.C. 102(b) as being anticipated by Lo et al (5,738,104).

Lo et al disclose an EKG based heart rate monitor and further disclose a means for providing signals indicative of muscle activity; a means for processing the signals in order to detect a particular activity; a means for providing a feedback signal; the device is operable in a setup mode and a use mode; in the setup mode the device is user controllable to receive first reference input signals from the providing means which are indicative of other muscle activity and to receive second reference input signals

indicative of the particular muscle activity; the device is configured in the setup mode to process the first reference input signals and the second reference input signals to identify therefrom at least one distinguishing criterion which differentiates the first reference input signals from the second reference input signals; in the use mode the device is configured to provide the feedback signal in response to detecting in the signals the at least one distinguishing criterion identified in the setup mode; the device is configured in the setup mode to process the first reference signals and the second reference signals to identify therefrom as the distinguishing criterion at least one frequency in the signals, the amplitude of the signals at which the frequency differentiates the first reference signals from the second reference signals, and wherein in the use mode, the device is configured to provide feedback in response to detecting at least a predetermined amplitude at the at least one frequency in the setup mode; in the setup mode the device is user controllable to receive the second reference input signals from the providing means which are indicative of an essentially maximal muscle activity; the processing means comprises a means for pattern recognition; the providing means comprises one or more electrodes for sensing EMG signals; the providing means comprises other sensor means; the apparatus comprises a slave module and a master module, the slave module being designed to be worn on the person; and a display means for displaying results. See Column 7, lines 25-42; Column 8, lines 63-65; Column 16, lines 33-48; Column 17, lines 10-11; and Column 19, lines 13-66.

6. Claims 52-59, 62, 63, 65, 67 and 68 are rejected under 35 U.S.C. 102(b) as being anticipated by Ober (4,669,477).

Ober discloses a means for preventing bruxism and further discloses a means for providing signals indicative of muscle activity; a means for processing the signals in order to detect a particular activity; a means for providing a feedback signal; the device is operable in a setup mode and a use mode; in the setup mode the device is user controllable to receive first reference input signals from the providing means which are indicative of other muscle activity and to receive second reference input signals indicative of the particular muscle activity; the device is configured in the setup mode to process the first reference input signals and the second reference input signals to identify therefrom at least one distinguishing criterion which differentiates the first reference input signals from the second reference input signals; in the use mode the device is configured to provide the feedback signal in response to detecting in the signals the at least one distinguishing criterion identified in the setup mode; the device is configured in the setup mode to process the first reference signals and the second reference signals to identify therefrom as the distinguishing criterion at least one frequency in the signals, the amplitude of the signals at which the frequency differentiates the first reference signals from the second reference signals, and wherein in the use mode, the device is configured to provide feedback in response to detecting at least a predetermined amplitude at the at least one frequency in the setup mode; in the setup mode the device is user controllable to receive the second reference input signals from the providing means which are indicative of an essentially maximal muscle activity; means for registering and storing the signals indicative of muscle activity during a time interval; the device is adaptable by having a means for adjusting the intensity of

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the feedback; the processing means comprises a means for pattern recognition; the providing means comprises one or more electrodes for sensing EMG signals; the providing means comprises other sensor means; the apparatus comprises means for storing data; a user module for wearing on the head; and a display means for displaying results. See Column 2, lines 30-68; Column 3, lines 1-29 and 60-68; and Column 4, lines 1-4.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 60 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ober (4,669,477) as applied to claim 52 above, and further in view of Junker et al (6,636,763 B1).

Ober, as discussed above, discloses a means for preventing bruxism but fail to disclose the use of a means of obtaining EEG signals.

Junker et al disclose a brain-body actuated system and further disclose the use of acquiring EEG signals. See Column 3, lines 25-33.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the means of Ober to include the use of EEG, since it is well known in the art that EEG signals can be used to indicate muscle movement.

9. Claim 61 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ober (4,669,477) and Junker et al (6,636,763 B1) as applied to claim 60 above, and further in view of Stice (4,993,423).

Ober and Junker et al, as discussed above, disclose a means of obtaining muscle activity signals but fail to disclose a means for testing the electrodes to determine if the electrodes are connected to the skin properly.

Stice discloses a means for differential lead impedance comparison and further discloses a means for testing the electrodes to determine if the electrodes are connected to the skin properly. See Column 2, lines 64-66.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Ober and Junker et al to include the ability of determining if the electrodes are contacting the skin, as per the teachings of Stice, since it is well known in the art to utilize a means of determining the contact of the electrodes since it provides a means of accurately acquiring bioelectrical signals from the patient.

10. Claims 64 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ober (4,669,477) as applied to claim 52 above, and further in view of Sunouchi et al (5,368,043).

Ober, as discussed above, disclose a means for preventing bruxism, but fail to disclose a computer and a means for transferring data thereto; and the apparatus comprises a slave module and a master module, the slave module being designed for wearing by a patient.

Sunouchi et al disclose a means for measuring muscle activity and further disclose a computer and a means for transferring data thereto; and the apparatus comprises a slave module and a master module, the slave module being designed for wearing by a patient. See Column 6, lines 65-68; and Column 9, lines 18-27.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the means of Ober to include the use of a computer, as per the teachings of Sunouchi et al, since it would provide an external processing means to process the data and control the feedback means.

Response to Arguments

11. Applicant's arguments filed February 12, 2008 have been fully considered but they are not persuasive.

The Applicants argue that Lo et al fail to disclose the claimed elements in Claims 52 and 68, in particular, an apparatus that receives first reference input signals (other muscle activity) from a means for providing signals that are indicative of other muscle activity, and receive second reference input signals (particular muscle activity) from the means for providing signals which are indicative of the particular muscle activity. Lo et al discloses a means for receiving EMG signals from the patient (other muscle activity, considered to be background noise) and receives EKG signals (particular muscle activity) from the patient. The Applicants assert the background noise is not a signal that is described to be the result of any specific "other muscle activity". The Examiner would

like to respectfully point out the fact that when the device of Lo et al is used, a person presses their body against the device to activate the electrodes of the device, and during this procedure, body movement would inherently create EMG signals and therefore would constitute "other muscle activity" when compared to the desired EKG signal.

In response to applicant's argument that the apparatus is not user controllable to receive a first reference input signal and to receive a second reference input signal, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

The Applicants further argue the apparatus is not user controllable to receive first and second reference input signals. The Examiner would like to respectfully point out Column 7, lines 34-36, where it is disclosed the user places their fingers on the contact electrodes to obtain the signals necessary to measure the pulse rate of the user. Therefore, the apparatus is user controllable to receive a first and second reference input signals.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., utilizing the apparatus for bruxism monitoring) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from

the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The Applicants then argue Ober fails to disclose an apparatus that receives a first reference input signal indicative of other muscle activity and receives a second reference input signal indicative of a particular muscle activity. Ober discloses a means for filtering out extraneous EMG signals in order to obtain a measurement indicative of the presence of bruxism. The "other muscle activity" is considered to be the EMG signals that do not meet the threshold criteria, and the "particular muscle activity" is considered to be the EMG signals that meet the threshold criteria.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., performing frequency analysis of the respective signal types and deduce therefrom particular frequency criteria for distinguishing the signal types from one another) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Szmaj whose telephone number is (571)272-4733. The examiner can normally be reached on Monday-Friday, with second Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571) 272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brian Szmal/
Patent Examiner, Art Unit 3736

/Max Hindenburg/
Supervisory Patent Examiner, Art Unit 3736